obtained from theoretical formula is validated using FEA (Eigen buckling analysis, ANSYS-12.0). FEA overestimated the buckling stress value for Al-Cu alloy conical shell than that of theoretical analysis.

(2) Also, for Al-Cu alloy conical shell, the critical buckling strengths obtained for Non-linear and linear buckling analysis using ANSYS 12.0 are compared against each other. Here, in this comparison, non-linear buckling analysis estimated lesser value than linear buckling analysis for critical buckling strength and is closer to actual failure of the conical shell. Hence nonlinear analysis is preferred to linear analysis for buckling process which is almost closer to the real time buckling process.

(3) For the CFRP composite shell, critical buckling strength obtained using linear buckling analysis is more than that obtained for Al-Cu alloy. Hence, we can replace Al-Cu alloy by CFRP composite material for the conical shell that is susceptible to buckling under uniform external pressure.

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